

## **Abstract**

**Work title:** Causes of discomfort perceived by laptop users

**Work objectives:** The objective of this thesis is to analyze which form factors of computers are being used by today's university students, the postures and habits exerted during the use and their effect on a perceived discomfort.

Determining the factors affecting the intensity of discomfort during the work with laptop will enable us to suggest suitable precautions that could improve user's discomfort.

**Methods:** Research method of this thesis was a survey conducted with 100 Czech university students. Questionnaire monitored the factors, that were suspected, according to studied literature, to affect the intensity of perceived discomfort. Dependency of reported discomfort on recorded data sets was analysed by regression analysis.

**Results:** Today's university students are using mostly laptops. With increasing percentage of time spent using notebook (as opposed to time spent with desktop computer) average intensity of discomfort is slightly increasing. During the work, laptop users were experiencing the greatest intensity of discomfort in the neck and head. There was no significant reported dependence between intensity of discomfort and the time spent using the laptop. Also, no statistically significant influence on intensity of discomfort was reported by neither screen size, nor position assumed while operating the laptop.

By using a computer mouse instead of touchpad, it is possible to decrease the discomfort intensity in the neck and upper extremities. Intensity of discomfort is further significantly affected by work in psychological stress.

**Keywords:** laptop computer, desktop computer, discomfort, intensity of discomfort, survey, external peripherals, mouse, keyboard, touchpad, posture, stress